Rogue Wave SOFTWARE
Accelerating Great Code

PV-WAVE

Visual data analysis

"PV-WAVE was the obvious choice for visual data analysis software. In addition to producing the publication quality graphics that my students and I need, PV-WAVE works across the multiplatform computing environment at Notre Dame. We also wanted software that would be compatible with software upgrades — PV-WAVE code ages very well. Without PV-WAVE, I would be out of business, and classroom offerings would suffer."

Professor Howard Blackstead
Department of Physics
University of Notre Dame

"We needed a robust analysis and visualization engine that was capable of handling large amounts of data very efficiently. We needed powerful statistical analysis, pattern recognition, and data visualization capabilities combined with interactive connectivity to several disparate manufacturing related data sources. JWAVE provided us with all of that and more."

Gretchen L. Jahn
President and Chief Executive Officer
Aegis Analytical Corp

PV-WAVE, an array oriented fourth-generation programming language, provides engineers with development tools to efficiently and accurately meet their data analysis needs, and allows users to rapidly import, manipulate, analyze, and visualize data, and share visualizations across the enterprise. Included in PV-WAVE is JWAVE, a tool for building web-based PV-WAVE applications. In addition, TS-WAVE, for time series analysis, allows for plot creation and batch processing of data.

PV-WAVE is used by engineers, scientists, researchers, business analysts, and software developers to build and deploy visual data analysis applications. These applications let users manipulate and visualize complex and large technical datasets to detect and display patterns, trends, anomalies, and other vital information.

Visual data analysis performs across multiple industries

- Test engineering
- Flight test engineering
- Satellite ground stations
- Meteorology
- Profitability analysis
- Predictive modeling
- Risk analysis
- Biological modeling

Rapidly import, manipulate, analyze and visualize complex datasets

Rapid data analysis and visualization combined with flexibility and power make PV-WAVE the choice among experts. By increasing productivity, accelerating development, and illustrating key knowledge contained in data, PV-WAVE gives organizations across a wide range of industries a key competitive advantage.

Forecast with visual data analysis

PV-WAVE allows users to obtain data from multiple sources and offers many options to visualize data of all types: from simple to complex, from small to large datasets, and in standard or proprietary formats. PV-WAVE has multi-dimensional plots, interactive display, and sophisticated and accurate forecasting tools that offer visual images to bring data to life.

Optimize performance of every operation, every time

PV-WAVE utilizes OpenMP, along with an industry unique tuning technique that provides automatic thread control (ATC). ATC ensures optimal execution time performance by automatically setting the number of threads needed for each upcoming array operation.

Visual data analysis capabilities on the web

Available to PV-WAVE developers is a tool for building web-based PV-WAVE applications, JWAVE. For web-based visual data analysis, JWAVE is the right tool for the job. JWAVE offers multiple graphics and visualization techniques so users can rapidly analyze, visualize, and share critical information across the enterprise, and across the world. JWAVE is based on a multi-tiered architecture that enables developers to easily create browser applications that use the power and flexibility of PV-WAVE for charting and data analysis and web user interfaces: HTML, Java, or JavaScript for the user interactions.

PV-WAVE levels of capabilities

PV-WAVE capability	PV-WAVE Foundation	PV-WAVE Advantage	PV-WAVE Extreme Advantage
4GL scripting language	✔	✔	✔
Robust data I/O functions	✔	✔	✔
Flexible data manipulation	✔	✔	✔
Extensive graphing capabilities (plot, surface, histogram, contour)	✔	✔	✔
Eclipse plug-in for debugging	✔	✔	✔
JWAVE web interface tool		✔	✔
IMSL C Math Library		✔	✔
IMSL C Stat Library		✔	✔
Advanced image processing			✔
Advanced signal processing			✔

Add-ons to PV-WAVE offer additional specialized functionality — data base connections for ODBC, Oracle and Sybase, and GTGRID for advanced gridding capabilities.

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Rogue Wave provides software development tools for mission-critical applications. Our trusted solutions address the growing complexity of building great software and accelerates the value gained from code across the enterprise. The Rogue Wave portfolio of complementary, cross-platform tools helps developers quickly build applications for strategic software initiatives. With Rogue Wave, customers improve software quality and ensure code integrity, while shortening development cycle times.